

NOTES ON HOVEA R. Br. (FABACEAE): 3

by

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ABSTRACT

Ross, J. H. Notes on *Hovea* R. Br. (Fabaceae): 3. *Muelleria* 7(1): 135-139 (1989). *H. arnhemica* from the Northern Territory is described as new. *H. longifolia* R. Br. var. *purpurea* (Sweet) Domin subvar. *planifolia* Domin from south-eastern Queensland is elevated to species rank as *H. planifolia* and the necessary combination is made.

HOVEA ARNHEMICA

Hovea arnhemica J.H. Ross sp. nov.

Affinite incerta, forsan *H. planifoliae* (Domin) J.H. Ross affinis, a qua corolla semper albida, planta multo minore, caulibus brevibus erectis vel decumbentibus, foliis minoribus lamina plus minusve plana, inflorescentia sessili, floribus minoribus, et arillo seminis quam semine ultra dimidio brevior, differt.

TYPUS: Northern Territory, Arnhem Land, 3 km NW. of Murgendela, 2.iv.1984, C.R. Dunlop 6673 (HOLOTYPUS: MEL; ISOTYPI: AD, BRI, CANB, CBG, DNA, HO, K, NSW, PERTH).

Subshrub to 60 cm high with a large lignotuber, multi-stemmed, the stems erect or decumbent, densely clothed with short curled hairs and longer straighter hairs up to 1.4 mm long, the hairs faintly or distinctly rusty-brown. *Leaves* spreading almost at right angles to the stem or deflexed, lamina more or less flat on upper surface on either side of the depressed midrib, lamina of upper leaves narrow-ovate or elliptic and of smaller lower or basal leaves ovate, obovate or subrotund, (0.7)2-6.3 cm long, (0.5)0.8-1.5 cm wide, apex acute, obtuse or sometimes emarginate, upper surface densely clothed with short curled white hairs, lower surface densely clothed with curled and scattered straightish white hairs except on midrib and margin where hairs are tinged with brown; petiole up to 0.3 cm long, densely clothed like the stem. *Stipules* subulate, up to 3 mm long, spreading laterally or somewhat recurved and often persisting for some time, glabrous and glossy above, densely pubescent on lower surface. *Inflorescence* axillary, sessile, mostly 2- or 3-flowered, rarely flowers solitary. *Flowers* pedicellate, the pedicels up to 1.5 mm long, densely clothed with spreading hairs; bracteoles narrow-ovate, 2-3.5 mm long, 0.8-1.3 mm wide, situated at the base of the calyx and shorter than or almost as long as the calyx-tube, inner surface with scattered appressed hairs, outer surface densely clothed with spreading hairs, with a conspicuous tuft of dark reddish-brown hairs in the axils; bract inserted at the base of the pedicel, narrow-ovate, 1.8-2.4 mm long, 1-1.2 mm wide, outer surface densely clothed with spreading hairs. *Calyx* densely clothed with short curled and longer straighter rusty-brown to whitish hairs: 2 upper lobes 5.5-6 mm long including the tube 1.5-2.5 mm long, the 3 lower lobes 2-2.7 mm long, acute. *Standard* 6-6.6 mm long, 7-8 mm wide, emarginate apically, white except for a greenish-yellow basal flare; wings 5.7-6 mm long, 2.2-2.8 mm wide; keel 4.8-5.2 mm long, 2-2.5 mm wide. *Stamen-filaments* 3.5-4.5 mm long. *Ovary* sessile or very shortly stipitate, 1.2-1.5 mm long, 2-ovulate. *Pods* sessile or almost so, obliquely ovoid or ellipsoid or sometimes transversely elliptic, 1.1-1.4 cm long, 1.1-1.4 cm wide, densely clothed with white matted hairs externally, fairly densely clothed with weak white hairs within. *Seeds* elliptic, plump, 4.7-5.8 mm long, 3.3-4.2 mm wide, 2.8-3.5 mm thick, chestnut-brown, hilum linear, the aril less than half the length of the seed, with a raised lateral lip. (Fig. 1).

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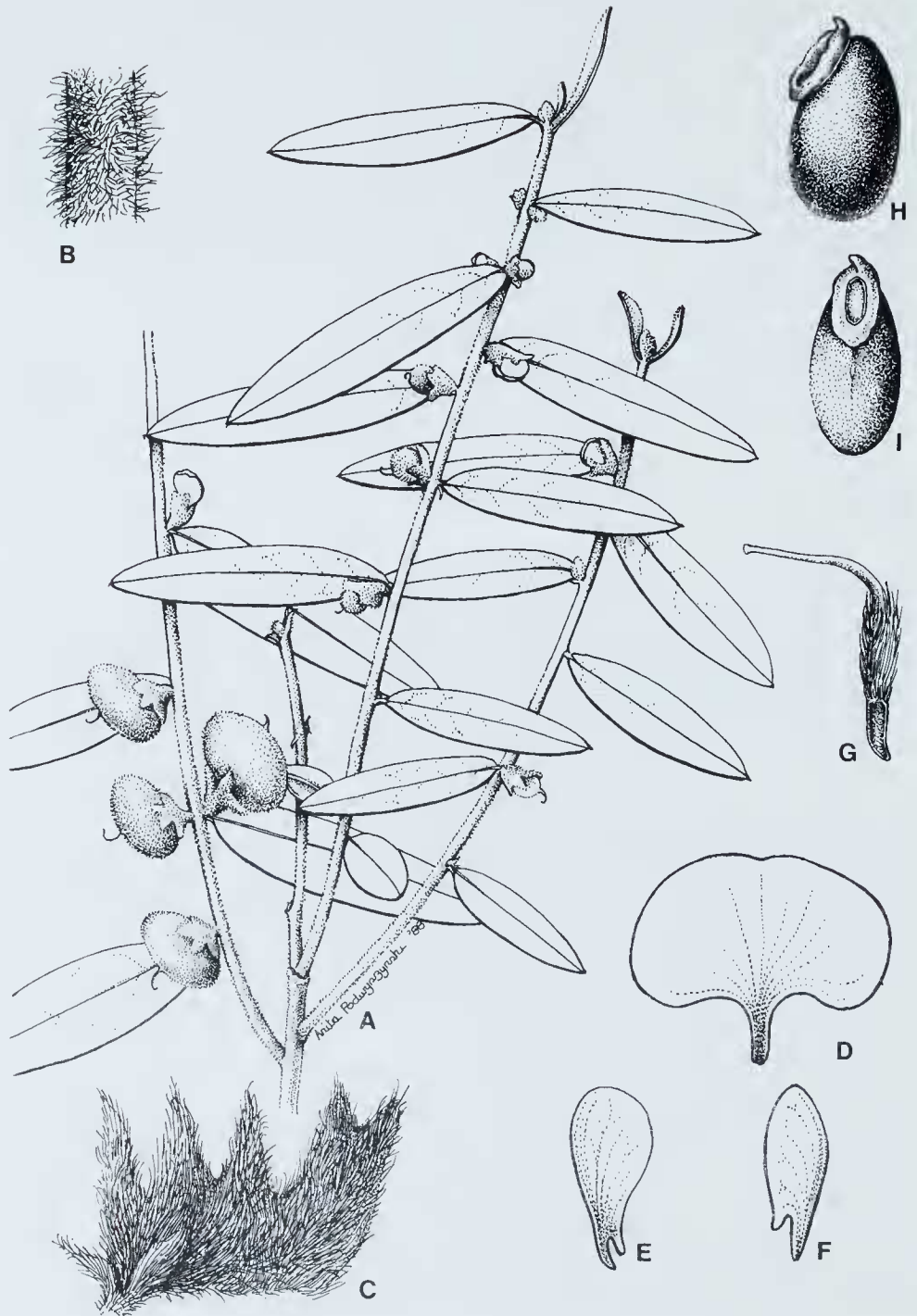


Fig. 1. *Hovea arnhemica*. A — flowering and fruiting twig, $\times 1$. B — surface of portion of stem showing indumentum, $\times 5$. C — calyx opened out (upper lobes on right), $\times 4$. D — standard, $\times 4$. E — wing petal, $\times 4$. F — keel petal, $\times 4$. G — gynoecium, $\times 9$. H — seed, side view, $\times 4$. I — seed, hilar view, $\times 4$. A–H from C. R. Dunlop 6673 (MEL 113278 and 113279).

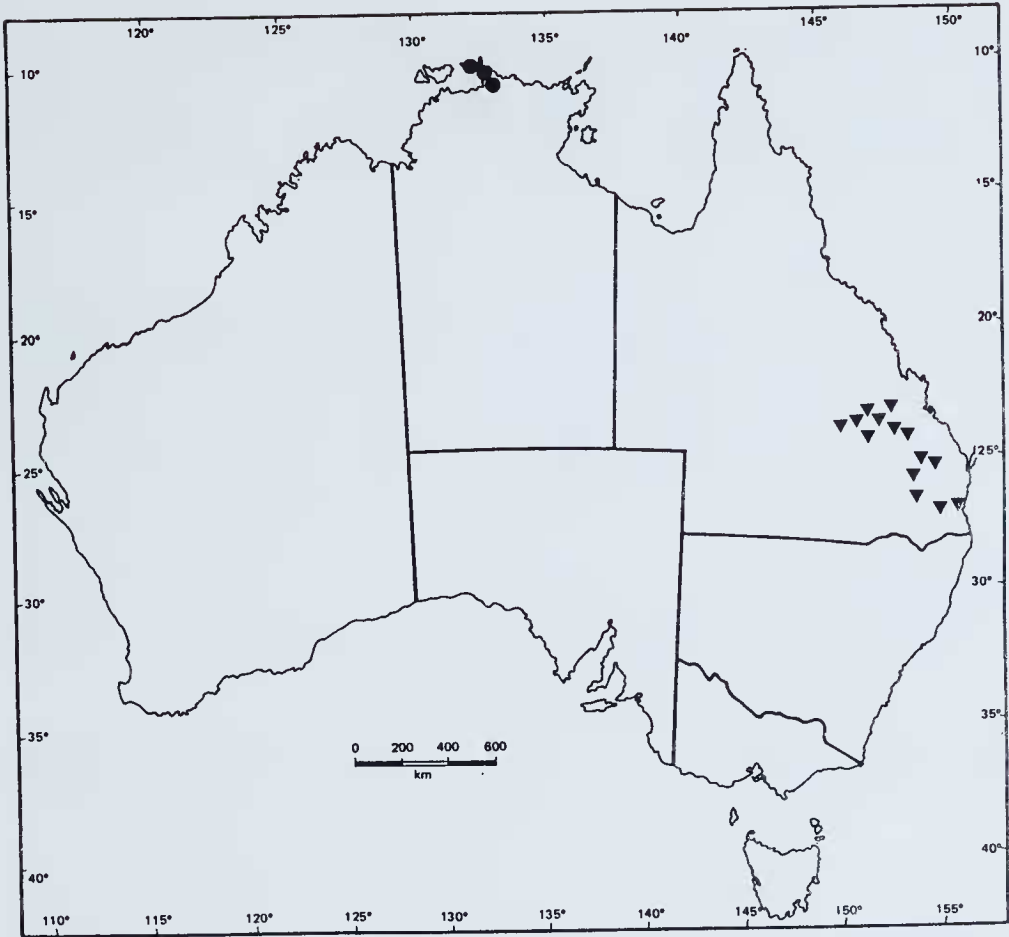


Fig. 2. The known distribution of *H. arnhemica* (●) and *H. planifolia* (▼).

Restricted in distribution to Arnhem Land north and north-west of Oenpelli in the Northern Territory (see Fig. 2). Recorded on deep sandy soil in open *Eucalyptus*, *Gronophyllum*-*Eucalyptus*-*Livistona* and *Ptychosperma elegans* forest. Often locally common.

REPRESENTATIVE SPECIMENS (Total number examined 15):

Northern Territory — 48 km N. of Oenpelli, 15.vii.1961, *G.M. Chippendale* sub NT 8101 (NT, MEL). 4 km SSW. of Raffles Bay, 19.vii.1961, *G.M. Chippendale* sub NT 8216 (NT, MEL). Port Essington, 21.iv.1818, *A. Cunningham* (CGE). Smith Point, Cobourg Peninsula, 8.x.1971, *J. Must* 827 (DNA, NSW, NT). 1 km W. of Nabarlek, 12° 18' S., 133° 18' E., 22.iv.1979, *M.O. Rankin* 2101 (BRI, DNA). Murgella road, Cobourg Peninsula, 11° 20' S., 132° 22' E., 31.v.1983, *G. Wightman* 444 & *C.R. Dunlop* (DNA, MEL).

NOTES:

This species was first collected by Cunningham on 21 April 1818 at Port Essington on the Cobourg Peninsula when he accompanied Lieutenant King in the 'Mermaid' (a duplicate in E numbered 270 from BM bears the date 1817 but presumably this is in error). Cunningham's material was referred to by Bentham (1864) as being closest to *H. longifolia* var. *pannosa* and was included by Domin (1925) under *H. longifolia* var. *lanceolata* subvar. *apiculata*. Apparently the species was not re-collected until the early 1960s.

H. arnhemica is isolated geographically from all of the other species in the genus and differs from all of them in that the corollas are apparently always white except for a

basal greenish-yellow flare on the standard. The affinities of *H. arnhemica* are not clear. The species is perhaps allied to *H. planifolia* from south-eastern Queensland from which it differs in being a much smaller plant with short erect or decumbent stems, in having smaller leaves spreading almost at right angles to the stem or deflexed, the leaf lamina more or less flat, sessile inflorescences, smaller flowers and seeds with an aril less than half the length of the seed.

HOVEA PLANIFOLIA

Domin (1925) followed Bentham (1864) in treating *H. longifolia* R. Br. as an 'omnibus' species and recognised within it five varieties and five subvarieties, one of which was var. *purpurea* (Sweet) Domin subvar. *planifolia* Domin. The brief description of subvar. *planifolia* was based on specimens ('viele Exemplare') collected by A. Dietrich from the Brisbane River, south-eastern Queensland, and on a specimen collected by F. Mueller from the same locality in August 1855.

The following syntypes have been located: Brisbane River, A. Dietrich (BRI 345294, HBG (5 sheets), NSW 166516, PR 527088, 527089, PRC, W 108297, 108299); Brisbane River, F. Mueller, August 1855 (K). MEL 667189 collected by Mueller from the Brisbane River is almost indistinguishable from the specimen in K but as it was collected in July 1855 rather than in August it is not regarded as a syntype.

It is clear that subvar. *planifolia* represents a taxon distinct from *H. longifolia* and that it merits specific rank. The opportunity is taken here of raising subvar. *planifolia* to specific rank and of providing a description and notes.

Hovea planifolia (Domin) J.H. Ross comb. & stat. nov.

BASIONYM: *H. longifolia* var. *purpurea* (Sweet) Domin subvar. *planifolia* Domin, Biblioth. Bot. 22 (89²): 729, fig. 141 (right hand specimen) (1925). LECTOTYPE (here selected): Queensland, Brisbane River, August 1855, F. Mueller (K).

Shrub 0.5–2(–2.5) m high, often wider than high, usually with several stems or the single stem branching at or a short distance above the base, branches ascending and spreading, branchlets densely clothed with short coiled or crinkled hairs and longer curled, crinkled or straightish hairs up to 9 mm long, the hairs on the young tips distinctly bright rusty-brown or reddish-brown. *Leaves* usually held more or less erect and almost perpendicular to the lateral branches or almost parallel to the vertical branches, sometimes held at an angle of about 45° but the lower surface usually conspicuous: lamina arched up slightly on either side of the depressed midrib and recurved towards the margin or slightly to distinctly V-shaped in section or sometimes more or less flat, narrow-ovate or elliptic, (2–)4–10(–13) cm long, (0.5–)0.9–2(–2.7) cm wide, apex rounded, obtuse or subacute, with a short mucro, upper surface dark green, sparingly to densely clothed throughout with short curled or twisted hairs or the hairs largely confined to the midrib and decreasing in frequency towards the margins, lateral veins sometimes prominent and somewhat raised, lower surface densely clothed with short coiled or curled hairs and longer curled, twisted or straightish hairs, the hairs greyish-white or rusty-brown, lateral veins often prominent despite the dense indumentum; petiole 0.3–0.9 cm long, densely pubescent like the branchlet. *Stipules* subulate, 2–3.2 mm long, 0.3–0.6 mm wide, densely clothed externally (abaxial surface) with short curled or crinkled hairs and longer spreading hairs, the hairs usually conspicuously rusty or reddish brown. *Inflorescence* axillary, on densely pubescent peduncles 0.2–0.8 cm long and usually 3-flowered or occasionally the axis growing on to form a many-flowered leafy shoot. *Flowers* pedicellate, the pedicels up to 2.5 mm long, densely clothed with short coiled or curled hairs and longer wavy or straightish spreading hairs; bracteoles narrow-ovate, 2.4–3.1 mm long, as long as to slightly longer than the calyx-tube, inserted at the base of the calyx, densely clothed with coiled, curled and longer wavy or straightish spreading hairs, the hairs usually bright rusty-brown; bract 2.5–3.5 mm long, inserted almost at the same level as the bracteoles; bract 2.5–3.5 mm long, inserted almost at the same level as the bracteoles; bract and bracteoles with reddish-brown glandular hairs in the axils. *Calyx*

densely clothed with coiled, curled or longer straighter hairs, the hairs silvery-white throughout or tinged with rusty-brown especially apically: 2 upper lobes \pm truncate, 4–5.2 mm long including the tube 2–3.5 mm long, the 3 lower lobes 1.5–2 mm long. *Standard* 8.6–9.5 mm long, 9.5–11 mm wide, pinkish-purple when young but turning purplish with age, with a greenish-yellow basal flare; wings 5.7–7.5 mm long, 3.3–4.2 mm wide; keel petals 4.5–5.9 mm long, 2.3–3 mm wide. *Stamen-filaments* 4.2–5.5 mm long. *Ovary* shortly stipitate, 1.5–2.5 mm long, densely pubescent, 2-ovulate. *Pods* shortly stipitate but stipe not exceeding the calyx-tube, obliquely or transversely ovoid or ellipsoid, 1–1.4 cm long, 0.8–1.6 cm wide, densely clothed with curled, twisted and wavy hairs externally, sparingly to densely clothed with weak curled or wavy hairs internally. *Seeds* ellipsoid, plump, 5.5–6.6 mm long, 3.8–4.2 mm wide, 3.5–3.6 mm thick, chestnut brown, hilum linear, the aril with a very small raised lateral lip and extending for almost the length of the seed.

Restricted in distribution to the Burnett, Darling Downs, Leichhardt, Maranoa and Moreton districts of south-east Queensland. Recorded most frequently from laterite, sandstone or shallow sandy soil among sandstone outcrops in open dry sclerophyll forest.

REPRESENTATIVE SPECIMENS (Total number examined 73):

Queensland — Burnett Distr., 44 km from Mundubbera on Durong Rd, 3.x.1982, *P.I. Forster 1408* (BRI); Darling Downs Distr., Barakula State Forest, 15.2 km E. of Chinchilla–Auburn Rd on road to Ballon Forest Office, 19.viii.1986, *J.H. Ross 3095* (BRI, MEL); Leichhardt Distr., Blackdown Tableland, 32 km SE. of Blackwater, 20.iv.1971, *R.J. Henderson, S.B. Andrews & P. Sharpe 724* (BRI, MEL, NSW); Maranoa Distr., 12 km NNE. of Mt Moffatt H.S., 13.v.1982, *V.J. Nelder & M.B. Thomas 711* (BRI); Moreton Distr., Blackstone, c. 8 km SE. of Ipswich, 3.x.1959, *L. Pedley 486* (BRI).

H. planifolia is distinguished readily by the large leaves which are amongst the largest found in the genus and by the distinctive bright rusty or reddish-brown hairs on the apices of the young growing shoots. The name *H. pannosa* Cunn. ex Hook. has been misapplied to this plant in Queensland.

An attractive open shrub with a generally greenish-grey appearance which would appear to have considerable horticultural potential.

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